

Application No.: 10/550,867

Docket No.: JCLAI7676

**REMARKS****Present Status of the Application**

The Office Action objected the claim 3 because of informalities.

The Office Action rejected claim 9 under 35 U.S.C. 102(b) as being anticipated by Barber (US 3,527,711) (hereinafter Barber). The Office Action rejected claims 1-4 and 11 under 35 U.S.C. 102(b) as being anticipated by or in the alternative, under 35 U.S.C. 103(a) as obvious over Ezoe (JP 10-101371) (hereinafter Ezoe). The Office Action rejected claims 5-7 and 10 under 35 U.S.C. 103(a) as being unpatentable over Ezoe in view of Hesse (US 2005/0160637) (hereinafter Hesse). The Office Action rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Ezoe as applied to claim 4 in view of Kobayashi (US 4,405,881) (hereinafter Kobayashi).

Applicants have amended claims 1-2, 4-6, 8 and 10-11, canceled claims 3, 7 and 9. All changes to the claims are fully supported by the originally filed claims, disclosure and the drawings. For at least the following reasons, Applicant respectfully submits that claims 1-2, 4-6, 8 and 10-11 are in proper condition for allowance. Reconsideration is respectfully requested.

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**Discussion of objections**

*The Office Action objected the claim 3 because of informalities.*

In response thereto, applicant has canceled claim 3.

**Discussion of Office Action rejection**

*The Office Action rejected claim 9 under 35 U.S.C. 102(b) as being anticipated by Barber. The Office Action rejected claims 1-4 and 11 under 35 U.S.C. 102(b) as being anticipated by or in the alternative, under 35 U.S.C. 103(a) as obvious over Ezoe. The Office Action rejected claims 5-7 and 10 under 35 U.S.C. 103(a) as being unpatentable over Ezoe in view of Hesse. The Office Action rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Ezoe as applied to claim 4 in view of Kobayashi.*

In response thereto, Applicants traverse these rejections for at least the reasons set forth below.

The features are recited in claim 1. With respect to claim 1, independent claim 1 recites the features as follows:

1. A luminescent glass article, manufactured by sintering a mixture of particles of a glass and a luminescent substance, comprising a structure in which the luminescent substance is dispersed uniformly in the glass, wherein:

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the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance having an average particle size of 75 to 5,000  $\mu\text{m}$ ;

light transmittance is 20 to 90% at a thickness of 10 mm; and  
an initial luminescence intensity just after irradiation of light of 1,000 lux for 20 min is 200 to 4,000 mcd/m<sup>2</sup>.

(Emphasis added)

Claim 4 also recites the similar features.

Ezoe, as shown in abstract, discloses that "light accumulating phosphor is uniformly dispersed and incorporated into the base material by 3-50wt.%." However, present invention disclosed that "the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%." Ezoe et al. discloses the content of 3-50 weight% which is out of the claimed range of 0.5 to 2.9 mass%. Ezoe, as shown in paragraph [0025], discloses that "light accumulating phosphor having an average particle size of 5-20 $\mu\text{m}$ ." However, present invention disclosed that "the luminescent substance having an average particle size of 75 to 5,000  $\mu\text{m}$ ." Ezoe fails to disclose that "the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance having an average particle size of 75 to 5,000  $\mu\text{m}$ " as required by the present invention, as set forth in claims 1 and 4.

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Hesse, as shown in paragraph [0005], only discloses that "Size ranging from 10-70 $\mu$ m particle size are preferably employed." However, present invention disclosed that "the luminescent substance having an average particle size of 75 to 5,000  $\mu$ m." Hesse also fails to disclose that "the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance having an average particle size of 75 to 5,000  $\mu$ m" as required by the present invention, as set forth in claims 1 and 4.

Kobayashi also fails to disclose that "the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance having an average particle size of 75 to 5,000  $\mu$ m" as required by the present invention, as set forth in claims 1 and 4.

Ohara (US 6,204,211) discloses the content of 0.1-30 weight% in the luminous glass ceramics that is composed of glass phase and crystallized phase, therefore is quite different from the luminescent glass article of the present invention that is manufactured by sintering a mixture of particles of a glass and a luminescent substance. Ohara also fails to disclose that "the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance having an average particle size of 75 to 5,000  $\mu$ m" as required by the present invention, as set forth in claims 1 and 4.

For at least the foregoing reasons, Applicants respectfully submit Ezoe, Hesse, Kobayashi and Ohara fail to teach or suggest the limitations of "manufactured by sintering a mixture of particles of a glass and a luminescent substance; the content of the luminescent substance in the luminescent glass article is 0.5 to 2.9 mass%, the luminescent substance

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having an average particle size of 75 to 5,000  $\mu\text{m}$ ", and thus the references combined do not teach or suggest each and every element claims 1 and 4. Therefore, independent claims 1 and 4 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claims 2, 5-6, 8 and 10-11 patently define over the prior art as a matter of law, because these dependent claims contain all features of their respective independent claims 1 and 4. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

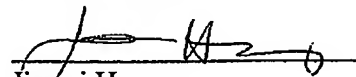
### CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-2, 4-6, 8 and 10-11 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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